

Leo Lefrançois, Jr., Ph.D., AAI '84

1956–2013

AAI leadership, members, and staff mourn the loss of Dr. Leo Lefrançois, Jr., who died on July 20th while vacationing in northern Italy. The following tribute was written by AAI President Marc K. Jenkins, Ph.D. AAI gratefully publishes the submission.

A Stunning Loss and a Lasting Legacy

Dr. Leo Lefrançois, Jr., a prominent immunologist and AAI member, died unexpectedly of a heart attack on July 20, 2013, while hiking in the Italian Dolomites. In addition to his wife and colleague, immunologist and AAI member Dr. Lynn Puddington (AAI '98), Leo is survived by two children, Dominique and Lucas, of West Hartford, Connecticut; a step-daughter, Mandi Leigh of Gunnison, Colorado; sisters Wanita Laviero and Elizabeth Ann Lefrançois [Ken Johnson] of Bristol, Connecticut; and brothers Richard [Anna] of Huntington Beach, California, and Ronald [Maria] of Washington, D.C., as well as many loving nieces, nephews, cousins, and aunts. His parents, Edna and Leo Lefrançois of Bristol, Connecticut, preceded him in death.

Leo was born on January 6, 1956, in Bristol, Connecticut, where he was raised and attended high school. Leo was the editor of the yearbook and the vice president of his class. His scientific bent began to show during his high school years. He accumulated a large chemistry set and developed an interest in combustion and model rockets. He built an extensive mouse habitat in his basement.

After graduating from high school, Leo attended Colorado State University where he earned a B.S. in microbiology and medical technology in 1978, with a certificate from the Malden Hospital Medical Technology Program in Malden, Massachusetts. After graduation, he worked for a year as a medical technologist at Bristol Hospital in Bristol, Connecticut, before moving on to doctoral studies in microbiology and immunology at Bowman Gray School of Medicine of Wake Forest University in Winston-Salem, North Carolina, where he received his Ph.D. in 1982. His thesis research focused on the adaptive immune response to vesicular stomatitis virus. Leo also met his future wife, Lynn, at Wake Forest.



Leo Lefrançois

From 1982 to 1986, Leo pursued postdoctoral studies with Dr. Michael Bevan in the Department of Immunology at the Scripps Clinic and Research Foundation in La Jolla, California. While at Scripps, Leo discovered heterogeneity in CD45 isoform expression by CD8⁺ T cells, cementing what would become a career-long interest in this population of lymphocytes.

Leo then took a position as a research scientist in the Department of Cell Biology at the Upjohn Company in Kalamazoo, Michigan, and worked there until 1991. During his time at Upjohn, Leo did pioneering work on $\gamma\delta$ T cells, discovering

that these cells are abundant in the intraepithelial lymphocyte population. He also served as commissioner of the company baseball league.

In 1992, Leo took a position as an associate professor in the Department of Medicine, Division of Rheumatic Diseases, at the University of Connecticut Health Center. He was promoted to professor in 1997 and became chief of the Division of Immunology in 2000. Leo was instrumental in establishing the Department of Immunology in 2005, of which he was named chair in 2011. His research achievements were recognized by election to the American Association for the Advancement of Science and the Connecticut Academy of Science and Engineering and by invitations to give prestigious lectures, including the Grand Marnier Foundation Guest Scientist in Residence at the Pasteur Institute in Paris and the Daisuke Nakada Memorial Lecture at the University of Pittsburgh.

Leo was an active and loyal member of the AAI, serving—at the time of his death—as an *ex officio* member of the AAI Council and program chair for the AAI annual meeting and chair of the AAI Program Committee. He served as an associate editor for *The Journal of Immunology* from 1990 to 1994 and as a section editor from 1995 to 2000. Leo dedicatedly attended the AAI annual meeting, serving as an abstract programming chair (1999–2003), as chair of major symposia, and as a frequent speaker in major sessions. The AAI lost one of its brightest stars and best friends when Leo died.

Leo will be long remembered as a pioneering cellular immunologist with interests in CD8⁺ memory T cells, mucosal immunology, and $\gamma\delta$ T cell biology. He believed

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IN MEMORIAM Leo Lefrançois (continued)

that a deep understanding of the T cell response depends on the capacity to track relevant antigen-specific lymphocytes in the bodies of hosts during immune responses to infections. Using state-of-the-art tools such as transgenic and gene-targeted mouse models, adoptive transfer of T cell receptor transgenic T cells, and peptide-MHCI tetramers, Leo's group made the seminal observations that antigen-specific CD8⁺ T cells migrate in large numbers to non-lymphoid tissues after infection, that the cytokine IL-7 promotes the survival of naïve and memory T cells, and that many intraepithelial T cells express the gamma-delta T cell receptor. These discoveries drive the field to this day. The exciting new research on tissue-resident memory T cells is a direct offshoot of Leo's discovery of the CD8⁺ effector T cell diaspora to the non-lymphoid tissues.

Many of Leo's discoveries are of such fundamental importance that they are described in modern immunology textbooks. Thus, Leo's ideas will continue to contribute to the education of immunology students around the world. Further, his discoveries will likely improve the lives of patients as vaccines are developed to generate tissue-resident memory T cells at portals of infection, and IL-7 is used to speed immune reconstitution after chemotherapy.

Leo's legacy will be preserved by his many talented mentees. He trained 13 Ph.D. students and 15 postdoctoral fellows. Remarkably, all of Leo's trainees have jobs as scientists and eight have tenure-track faculty positions at top universities. Many of these individuals will continue to make discoveries in the areas in which Leo mentored them, but many will also follow new pursuits empowered by the confidence he instilled in them.

The University of Connecticut will perpetuate Leo's legacy by establishing a memorial fund in his name at the UConn Foundation, which will be used to support University of Connecticut graduate students, fellows, and/or junior faculty in their efforts to define the fundamental principles of the immune system. This is a fitting honor for a scientist who did so much to enhance the prestige of the University of Connecticut.

Leo will remain in the hearts and minds of those who knew him well. Indeed, Leo was a very memorable fellow. He could be blunt with criticism but equally forthright with praise. While Leo was passionate about his science, he also seemed to be having more fun than the rest of us. He liked to play golf, ski, and hike; read science fiction; smoke a stogie from time to time; and have a beer. He liked bars. I suspect that many of us met Leo for the first time

in a bar. He liked good food and he liked to prepare it with Lynn in their gourmet kitchen. And he liked to share these interests with friends, whether on the road at scientific conferences or at home. Indeed, Lynn and Leo opened their home to many itinerant friends, made them a meal, and took them out for a round of golf. Leo was fun to be with. If I can find any consolation in his death, it is the knowledge that he died living his life to the fullest, doing something that he loved with his wife and in the company of close friends.

In my *President's Message to Members* (see p. 3), I contend that the AAI empowers its members. Now, I hope that it can provide some comfort. I plan on dedicating the AAI President's Symposium at IMMUNOLOGY 2014™ in Pittsburgh to Leo's memory. I look forward to chatting with you in Pittsburgh about Leo's life. Maybe we should do it in the bar. Leo would have liked that.

A celebration of Dr. Lefrançois's life was held on August 10 at Rosedale Farms, Simsbury, Connecticut.

Readers wishing to share memories and/or offer condolences online may do so by visiting <https://sites.google.com/site/aaioibit>.

Memorial donations may be made to the University of Connecticut Foundation, Inc., in memory of Dr. Leo Lefrançois, Jr. Checks should be made payable to UConn Foundation, Attn: UConn Health Center, P.O. Box 842948, Boston, Massachusetts 02284-2948.

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Pictured in May at the AAI President's Service Appreciation Reception at IMMUNOLOGY 2013™ in Hawaii, AAI Program Chair Leo Lefrançois (second from left) along with (L-R) wife Lynn Puddington, Susie Hedrick, Steve Hedrick, Mick Croft